



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-7B26E/B2F BYPASS RATIO: 5.1  
 UNIQUE ID NUMBER: 11CM076 PRESSURE RATIO ( $\pi_{00}$ ): 27.7  
 COMBUSTOR: Tech Insertion  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 117.0

REGULATORY DATA **\*\* DATA SUPERSEDED \*\*** SEE FOLLOWING UID FOR REVISED DATA: **01P11CM120**

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	3.0	50.6	43.1	14.4
AS % OF ORIGINAL LIMIT	15.4	42.9	45.2	63.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			56.5	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			68.1	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			77.3	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			91.9	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 - OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	1.213	0.02	0.20	21.79	13.1
CLIMB OUT	85	2.2	0.986	0.02	0.16	17.08	9.8
APPROACH	30	4.0	0.331	0.05	3.07	8.93	2.1
IDLE	7	26.0	0.108	1.75	30.94	4.27	2.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			429	302	5476	4762	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				7	7	7	7
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				2.6	46.8	40.7	13.1
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.4	2.6	1.2	4.1
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				2.18-2.91	43.8-48.7	39.8-42.1	8.4-16.2

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT All POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.6-98.5
TEMPERATURE (K)	277-293
ABS HUMIDITY (kg/kg)	0.0015-0.00628

### FUEL

SPEC	Jet A
H/C	1.92-1.93
AROM (%)	16.2-17.5

MANUFACTURER: CFM International  
 TEST ORGANIZATION: General Electric Company  
 TEST LOCATION: PTO, Ohio  
 TEST DATES: 29/09/2005-23/03/2006

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Ref. GE REPORT CR-2097/3
2. Rev. 1 Engine S/N 874-026/01, 778-024/01B, and 892-769/01
3. Ref. GE REPORT CR-900E Rev. 2, July 19, 2010
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)